

# owner's manual



Quality. Uncompromised.

# ROTEL® RX-880

AM/FM STEREO SYNTHESIZER RECEIVER

**WARNING**  
TO PREVENT FIRE OR SHOCK HAZARD,  
DO NOT EXPOSE THIS APPLIANCE TO  
RAIN OR MOISTURE

Write your SERIAL NUMBER here.  
The number is located near the name  
plate on the rear panel.



## INTRODUCTION

We at Rotel want to thank you for purchasing our audio product.

Rotel audio products are designed to use the latest electronic technology, and they incorporate our long experience as a specialist manufacturer of audio equipment. We are confident that you will find satisfaction in the high quality sound and top performance, and that you will find pleasure in the functional beauty achieved through human-engineering concept. Before starting operation, please read this instruction manual thoroughly and acquaint yourself with the proper mode of using the unit and all its connections.

We hope you will enjoy top-notch performance for many years to come.

## BEFORE ENJOYMENT/ POWER SUPPLY

Follow the instructions below for maximum safety:

### 1. Use a wall outlet or Rotel RR-800 for power supply

Be sure to connect the AC line cord directly to a household wall outlet or Rotel RR-800, and not to an auxiliary outlet on another component. Be certain that the outlet voltage matches the electrical rating of the unit, found on the rear panel name plate.

### 2. Connecting and removing AC cord

Be sure to connect or disconnect the AC line cord only after turning off the power switch to prevent possible shock noise or damage to the speakers.

### 3. Ventilate the unit well

Never block any ventilation holes at the top and bottom of the unit. Be sure also to provide ample ventilation space around the unit. Poor ventilation may result in damage due to excessive heat.

### 4. Do not open the cabinet

In order to avoid electric shock or damage to the component, never open the cabinet. If a foreign object falls inside the unit by mistake, turn the power off, disconnect the wall plug, and consult a qualified electrician or your dealer.

### 5. Installation

Be sure to place the unit in a level and flat place where it is free from humidity, vibration, high temperature and not exposed to direct sunlight. Be careful not to place the unit in a highly enclosed place such as near a wall or on a bookshelf. A poor ventilation will cause undesirable effects to the unit.

### 6. Moving the unit

When transporting, remove the AC cord from the wall outlet and all other connected cords on the rear panel to prevent wire breakage and short circuits.

### 7. If the unit gets wet

If the unit should get wet, immediately disconnect the AC cord, and consult your dealer or a qualified electrician.

### 8. Cleaning and maintenance

Do not use chemicals such as benzine or thinners on the front panel. Always use a soft, dry cloth to clean the unit.

### 9. Owner's manual

Keep the owner's manual near the unit, and record the serial number (found on the rear panel) on the cover.

## SPEAKERS

Use speaker systems with impedance ratings of 8-16 ohms. Before hooking up your speaker system, be sure to check its impedance, which should be indicated either on the back of the speaker, or in the speaker instruction manual.

## HOOING UP SPEAKERS

On the rear panel of the RX-880 are two sets of speaker terminals, "A" and "B", to which two speaker systems may be connected. Connect the speaker leads of the right-hand speaker to terminals "R" of "A" (or "B"), and the speaker leads of the left-hand speaker to terminals "L" of "A" (or "B"). Make sure that the "+" speaker lead is connected to the "+" terminal, and the "-" lead to the "-" terminal.

Strip 1.0cm (3/8") of the polyvinyl chloride insulation from the end of each speaker lead. Twist the exposed strands tightly, and secure the end with a touch of solder.

The terminals are the push-insert type. Insert the end of the lead into the hole while pushing on the button. Then release the button; the hole will close and the cord is firmly fixed.

## ANTENNA INSTALLATION AND CONNECTION

### ■ FM Antenna

Proper installation of antenna is the key to smooth signal reception. To install the attached T-shape indoor antenna, stretch it taut and secure horizontally along a wall or the like in a location where signal reception is optimal. Securely connect the antenna to FM antenna terminals marked "300Ω" on the rear panel. If outdoor type FM antenna is installed, the T-shape antenna is not necessary. For proper use of your outdoor FM antenna, follow the instructions below.

1. Be sure to select the most appropriate type of antenna for the signal reception conditions in your area.

2. A 75-ohm coaxial cable is recommended in connecting the antenna to the unit.

3. Set the antenna in a position as high as possible if buildings, mountains or other obstructions nearby affect reception.

4. The 75-ohm coaxial antenna cable should be properly hooked up to the designated antenna terminals on the rear panel: Locate the terminals labeled "75Ω". Connect the center conductor of the cable to the left-hand terminal, and connect the outer braided conductor of the cable to the right-hand terminal (marked "GND").

## EXCLUSIVE NOTE FOR U.K.

If your unit comes with a 2-core cable without a plug, make certain live and neutral leads are connected to the proper terminals. Check that the terminals are screwed down firmly and no loose strands of wire are present.

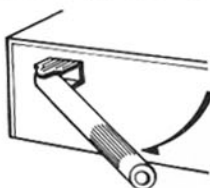
**IMPORTANT:** The wires in this mains lead are coloured in accordance with the following code:

BLUE: NEUTRAL  
BROWN: LIVE

**Note:** The terminals are the push-insert type. Insert the end of the lead into the hole while pushing on the button. Then release the button; the hole will close and the cord is firmly fixed.

### ■ AM Antenna

Erect the AM ferrite bar antenna provided on the rear panel. If you install outdoor AM



antenna, connect the antenna lead wire to the antenna terminal marked "AM."

## CONNECTING COMPONENTS

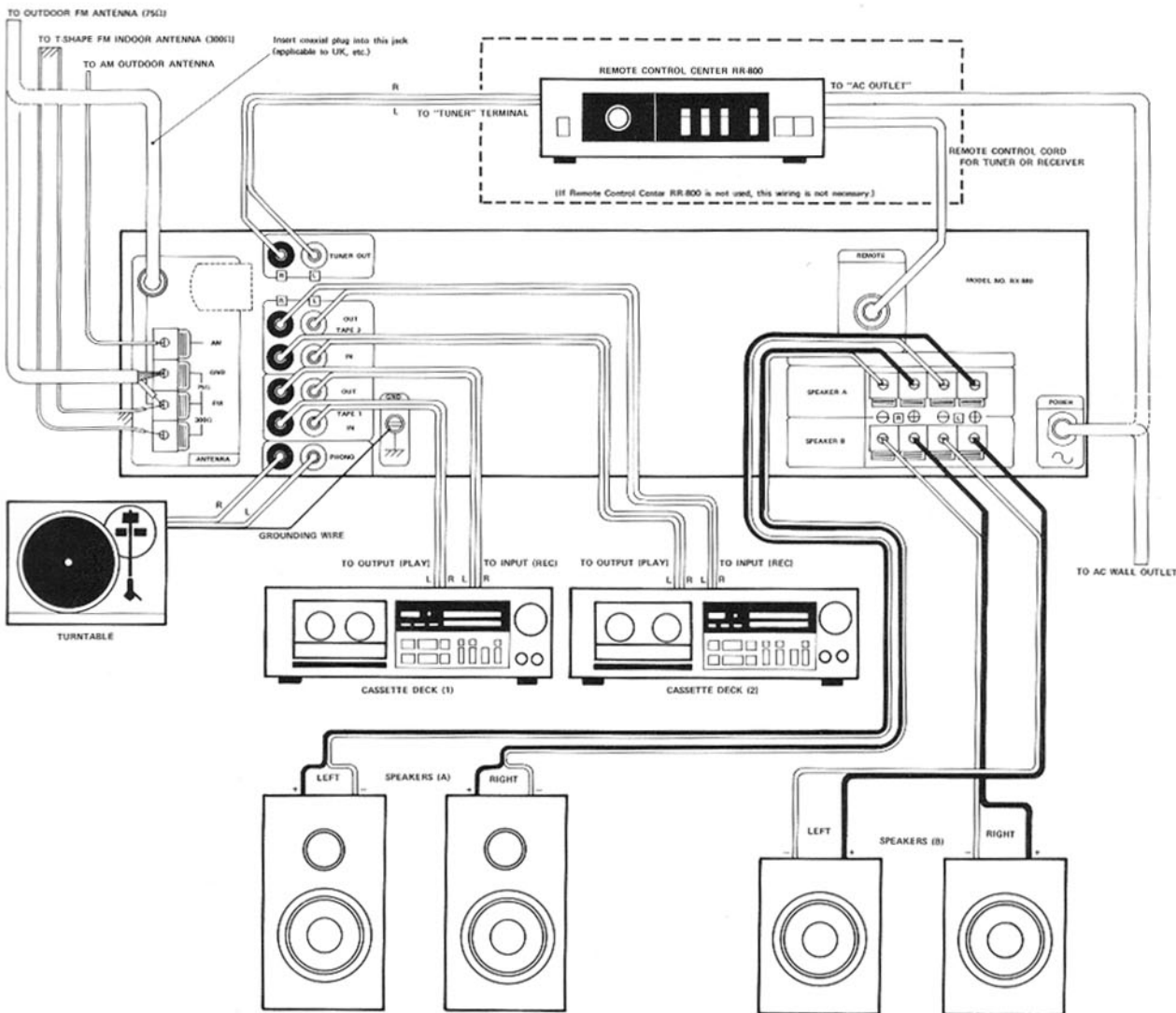
Connect all necessary audio components to the rear panel of the unit, using RCA pin cords. See the illustration for properly completed connections. When connecting RCA pin cords, be sure that L (left) and R (right) markings on each component are matched correctly. Connect the grounding wire of the turntable to the terminal marked GND on the receiver.

**Note:** The terminals on the rear panel marked TUNER OUT produce signal from the tuner section. These terminals are used when operating the unit in conjunction with the ROTEL Remote Control Center RR-800.

The rear panel of the unit is provided with a socket for connecting the Rotel Remote Control Center RR-800, which allows wireless-remote-control of the unit.

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows. The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLUE or BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured BROWN or RED.

# REAR PANEL CONNECTIONS

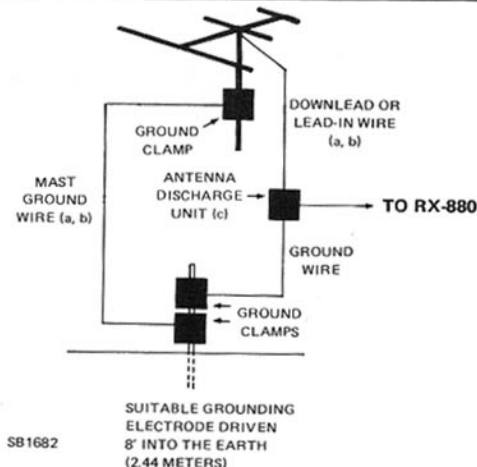


## EXCLUSIVE NOTES FOR THE U.S.A.

### Outdoor Antenna Grounding

If an outside antenna is connected to the receiver/tuner, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1978, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See figure.

- Use No. 10 AWG copper or No. 8 AWG aluminum or No. 17 AWG copper-clad steel or bronze wire, or larger as ground wires for both mast and lead-in.
- Secure lead-in wire from antenna to antenna discharge unit and mast ground wire to house with stand-off insulators, spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.
- Mount antenna discharge unit as closely as possible to where lead-in enters house.



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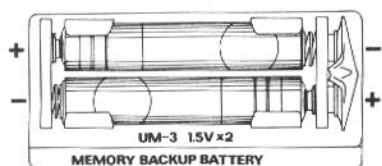
## POWER SUPPLY TO MEMORY CIRCUIT

When the power switch on the front panel is set to ON, power is supplied to the memory circuit from the AC mains (through the wall outlet). When the power switch is set to OFF or when the power cord is unplugged, the back-up batteries (dry batteries) housed in the rear panel will provide power instead of the AC mains, thus maintaining the memory of the receiving frequencies.

Before using the unit, correctly fit the two SUM-3 ("AA") dry batteries provided into the battery holder in the rear panel. (Observe the polarity markings on the inside of the battery holder). The life of the batteries is about one year.

When replacing the batteries, first make sure that the power cord is plugged into the wall outlet and the power switch on the front panel is set to ON.

If power from both the power cord (AC mains) and the dry batteries is cut off simultaneously, the receiving frequencies stored in the memory will be lost.



## SWITCHES AND CONTROLS

### (1) Power Button

Press the power button to turn on the unit. When the power is on, the dial scale will be illuminated. Press the button a second time to turn off the power.

### (2) Peak Power Level Indicators

Displays the output levels for left and right channels respectively. Each bank of 10 LEDs allows direct reading of power output in a range from 0.02 watt to 120 watts referenced to 8-ohm load.

### (3) Hi-Blend Button

When the incoming stereo FM signal is weak, high frequency noise may disturb the reception. In such a case, depress this button; the left and right channel signal will be blended in the high frequency range, and the noise, which is in opposite-phase in each channel, will be suppressed without significant sacrifice of stereo separation. There is no need to use this button when the stereo FM signal is strong enough. The Hi-blend button is effective in stereo FM broadcasts only.

### (4) FM Auto/Manual Button

When this button is in the released position, you can tune in FM stations in automatic tuning mode. In the depressed position, tuning is made in manual mode, for either FM or AM reception.

### (5) FM Mode/Muting Button

When this button is pressed to ON, any FM broadcast is received monaurally. Be sure to leave the button in the released (OFF) position during normal stereo FM reception. In the OFF position, interstation noise generated when tuning in an FM station will be reduced.

### (6) Frequency Display

Indicates frequency currently tuned in, along with notations "FM" and "MHz" in FM reception, or "AM" and "kHz" in AM reception.

### (7) Signal Strength Indicator

The five LEDs show incoming signal strength; the greater the number of glowing LEDs, the better the receiving condition.

### (8) Stereo Indicator

Glowing when stereo broadcasting signal is tuned in. Note that when stereo signal is very weak, the unit will not give stereo reproduction, and the indicator will not light up.

### (9) Mode Button

When this button is depressed, any input signal will be heard monaurally. In the released position, the stereo source is reproduced stereophonically.

### (10) Subsonic Filter Button

The subsonic filter cuts the noise in low frequency range without affecting the sound quality. When this button is in the depressed position, frequencies below 16Hz are cut off at the -6dB/octave, reducing disturbing subsonic effects such as low frequency noise caused by record warpage, or shock produced when the stylus is lowered onto a record.

### (11) Loudness Button

The human ear has a tendency to become less sensitive to very low or high frequencies when listening at reduced volume levels. This button activates a compensation function that boosts those frequencies so that a more natural sound is heard.

### (12) Tuning Button, DOWN

Used when tuning in a station whose frequency is lower than the reading on the frequency display.

### (13) Tuning Button, UP

Used when tuning in a station whose frequency is higher than the reading on the frequency display.

### (14) Speaker Buttons (A, B)

By these buttons you may select speaker system you wish to use. Press button A to activate the speaker system connected to speaker terminals A on the rear panel, and button B for the system connected to speaker terminals B. Depressing both A and B buttons will activate both speaker systems. When only one speaker system is hooked up, press the corresponding button only, and release the other button to OFF. Otherwise no sound will be produced.

### (15) Headphone Jack

Plug your headphones into this jack for private listening. When using headphones, both A and B speaker buttons should be in released (OFF) position so that sound is emitted only from the headphones. Volume level of headphone sound can be controlled with the volume control.

### (16) Bass/Mid/Treble Tone Controls

These knobs allow you to regulate frequency response in 3 separate ranges. Use them to tailor your favorite sound. The knob labeled BASS is used for low frequency range, the knob labeled MID is for middle frequency range, and the knob labeled TREBLE is for high frequency range. Move each knob upward to boost the response, and downward to cut it. In the mid-position, the response is flat.

### (17) Memory Program Button

To enter a given station frequency into the unit's memory circuit, press this button first, and then press the desired station button. The indicator above the Memory Program button glows when the button is pressed, indicating that the unit is ready for you to preset your station.

### (18) Station Buttons

These buttons are used to tune in to desired preset stations, or to preset given station frequencies in unit's memory.

The indicator above each button glows when the button is pressed.

### (19) Tape Monitor Selector

Used to receive signal from the tape deck, or when dubbing (tape-to-tape copying).

Set the selector to TAPE 1 position when playing back tape deck connected to TAPE MONITOR 1 terminals on the rear panel; set to TAPE 2 when playing back tape deck connected to TAPE MONITOR 2 terminals.

When dubbing signal coming from the tape deck connected with TAPE MONITOR 1 terminals onto tape in deck connected to TAPE MONITOR 2 terminals, set the selector to 1→2 position. When dubbing signal from the deck connected with TAPE MONITOR 2 terminals onto tape in deck connected to TAPE MONITOR 1 terminals, set to 2→1 position.

When listening from sources other than tape, set the selector to OFF position.

### (20) Function Selector

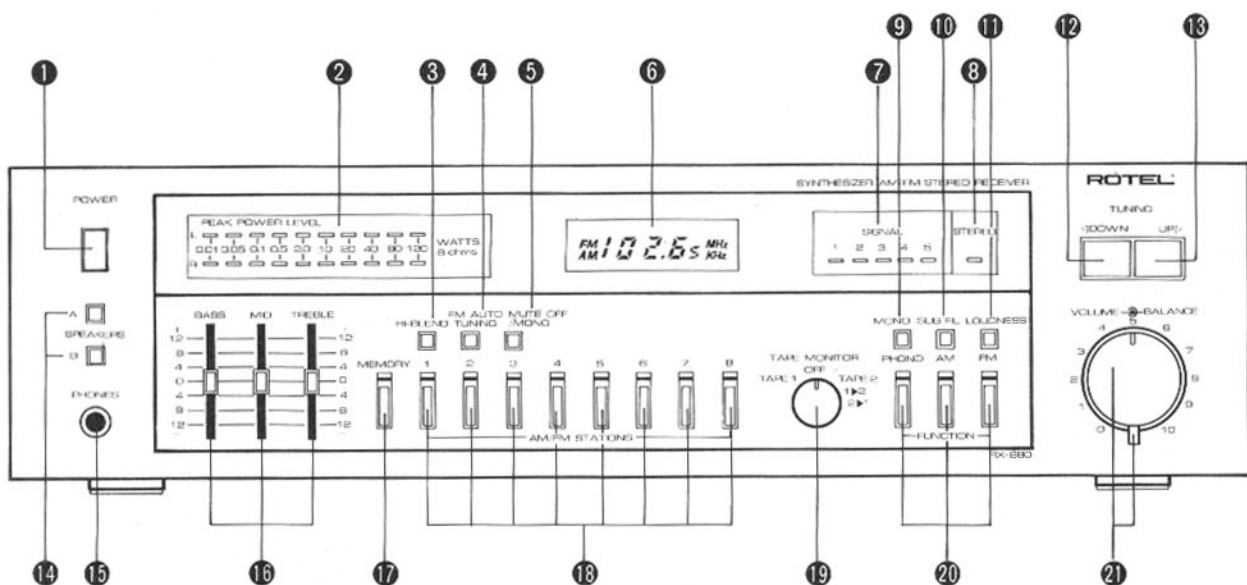
The function selector is used to select program sources you wish to listen to. Note that this selector is effective only when the Tape Monitor selector is set to OFF position.

Press PHONO button to get signal from turntable. Press AM button to listen to AM broadcast, and press FM button for FM broadcast. The indicator above each button glows when the button is pressed.

### (21) Volume/Balance Control

The knob regulates the volume level. Turn it to the right to raise the level. When turned all the way to the left, no sound is produced. Before turning on the power, always be sure to have the volume set at zero.

The adjoining ring is used to regulate the balance of sound output from the speakers. Turning the ring to the left shifts the center of total sound to the left, and turning to the right shifts the center to the right. In mid-position, sound produced from both speakers is equally balanced.



## OPERATION

• The RX-880 is an AM/FM stereo receiver employing quartz PLL synthesizer tuning for superb operability.

By presetting the broadcasting frequency, optimum tuning will be obtained every time by simply pressing the selector button.

When the power switch is set to ON, power will be provided to the memory circuit from the AC mains. In the event of a power failure, or when the power switch is set to OFF or when the power cord is unplugged from the wall outlet, the memory circuit will be powered by dry batteries housed in the rear panel of the receiver. Consequently, the memory circuit will continue to function when the receiver is not being used, throughout the life of the batteries.

One presetting button can be used to memorize one AM and one FM stations. A total of 8 AM and 8 FM stations can be preset.

• Insert the SUM-3 ("AA") dry batteries (two) provided into the battery holder in the rear panel of the receiver, ensuring that the polarities agree with the markings inside the battery holder. This will ensure that power will be continuously supplied to the memory circuit. When the AC mains power is cut off, the batteries will maintain the memory circuit energized instead. The life of the batteries is about one year. When it is time to replace the batteries, replace them both with new ones.

**Note:** Replace the batteries with the power cord plugged in and the power switch set to ON. If the AC mains power is cut off during this operation, the contents of the memory circuit will disappear.

• Before commencing operation, check to see that all connections are properly made.

• Always be sure to set the volume control to the minimum position before turning on power.

• Select speaker button A or B (or both) for the speaker system(s) you are going to use.

• When using headphones, set both speaker buttons to released (OFF) position.

• Set the tone controls and loudness button as desired.

## Radio Listening

1. Set Tape Monitor selector to OFF.
2. Press FM or AM button on the Function selector.
3. Tune in to the desired station using tuning or station buttons.
4. Raise the volume to the desired level.

## TUNING:

The unit is designed to permit three modes of tuning: auto tuning, manual tuning, and preset memory tuning.

### • Auto Tuning (for FM Reception Only)

Set FM Auto/Manual button to the released position. Press Tuning button, UP or DOWN. Automatic scanning of FM band begins. Scanning stops when it reaches a point where the input signal exceeds a certain acceptable level. The receiving frequency is held on the readout. To tune in to another station, press DOWN or UP button according to the frequency of the desired station.

### • Manual Tuning

Set FM Auto/Manual button to the depressed position. A tap of the tuning button, DOWN or UP, will shift the tuning frequency in specified increments. If you keep the button pressed down, the frequency will change continuously. Release the button to stop frequency change.

### • Preset Memory Tuning

Tune in to the desired station in either auto or manual tuning mode. Press the Memory Program button. The indicator above the button will light up. Then, press any station button, 1 through 8, to enter the frequency into the memory circuit. Thereafter, you may recall the same frequency any time simply by pressing the same button.

Note that the indicator remains on for several seconds only; you should press the appropriate station button to enter the station frequency during that time. If the indicator turns off before you press the station button, entry cannot be made. In that case start again, following the above procedures. The above procedures should also be followed to change the station preset for a given station button.

**Note:** If you have turned off the unit, and

turn it on again, the unit will tune in to the station frequency to which it was tuned immediately before turn-off.

## Turntable Listening

1. Set Tape Monitor selector to OFF.
2. Press PHONO button on the Function selector.
3. Start play, and then raise the volume.

## Tape Deck Playback

1. Set Tape Monitor selector to TAPE 1 or TAPE 2 position according to the tape deck you are going to play back.
2. Start playback.
3. Raise the volume to the desired level.

## Recording Program Source

Play the desired program source according to the procedures noted above. The signal from the source will appear at TAPE MONITOR OUT terminals on the unit rear panel. Put the tape deck in the recording mode to record the signal. During recording, manipulating volume control, tone controls, etc. will have no effect on the signal being sent through the TAPE MONITOR OUT terminals.

## Dubbing

"Dubbing" means copying the recording on one tape onto another by using two tape decks. The unit allows you to dub either from "TAPE 1" to "TAPE 2", or from "TAPE 2" to "TAPE 1".

1. Set Tape Monitor Selector to 1→2 position when you dub from "TAPE 1" to "TAPE 2", or set to 2→1 position when dubbing from "TAPE 2" to "TAPE 1".

2. In "1→2" dubbing, put the "TAPE 1" deck in playback mode, and "TAPE 2" deck in recording mode. In "2→1" dubbing, put the "TAPE 2" deck in playback mode, and "TAPE 1" deck in recording mode.

During dubbing, you may monitor the sound with the volume and tone controls set as desired; these controls have no effect on the recording signal.

## PROTECTION CIRCUIT

The RX-880 incorporates all possible safety measures by combining multiple protection circuits to prevent accident or damage.

If for some reason the protection circuit is activated, there will be a sudden cut-off of sound from the speakers.

If no sound is produced, the reason may be due to the functioning of the protection circuit. First, turn off the power and disconnect the plug from the electrical outlet, and check to be sure that the speaker cables are not short-circuited. Also check to make sure the impedance of each speaker is 8 ohms or over (if it is below 8 ohms, the unit will be overloaded due to low impedance).

After checking the above points, turn the power on, and the protection circuit will be automatically deactivated and the unit will start functioning again.

The protection circuit will normally operate to prevent a popping noise from being generated upon turning on the power. No sound is produced for several seconds after turn-on.

## HUM AND NOISE

In any high fidelity installation, hum may be caused by the interconnection of a turntable, tuner and amplifier, and speakers as the result of wiring, different grounding or locations of components.

If hum is experienced with your unit, disconnect everything but the speakers from the unit. Plug in the turntable and if hum or howling appears, move the turntable away from the speakers as much as possible.

Note hum may also be induced by defective cable connections or by running the cables too close to a strong AC field.

When your unit picks up noise during the reception of broadcasts, causes are mostly due to external objects such as fluorescent lamps and house appliances using motor or thermostat, or others that may induce the noise.

Either relocating the unit away from the noise sources or using an improved outdoor antenna may readily solve the problem.

In the event you cannot find the cause, consult your dealer or a qualified electrician.

## VOLTAGE SELECTION

**Not available for U.K., Canada and Scandinavia**

The unit is a variable voltage equipment that can run on 120V, 220V or 240V power supply. Your unit should already be preset at the proper voltage for use in your area. However, if you move to an area where the power supply voltage is different, consult your dealer.

## SPECIFICATIONS

### AMPLIFIER SECTION

Continuous Power Output . . . . .	.80 watts* per channel, min. RMS both channels driven into 8 ohms from 20 to 20,000 Hz with no more than 0.009% total harmonic distortion.
DIN Output . . . . .	.120 watts per channel (1 kHz, 4 ohms, 1% THD)
Music Power . . . . .	.600 watts total
Total Harmonic Distortion. . . . .	No more than 0.01% (1 watt per channel power output) No more than 0.009% (continuous 1/2 rated power output) No more than 0.01% (1 watt per channel power output, 8 ohms)
Intermodulation Distortion . . . . .	No more than 0.009% (continuous rated power output) No more than 0.009% (continuous 1/2 rated power output) No more than 0.1% (1 watt per channel power output, 8 ohms)
Output: Speaker . . . . .	.8-16 ohms
Headphone. . . . .	.4-16 ohms
Damping Factor. . . . .	.47 (1 kHz, 8 ohms)
Input Sensitivity/Impedance:	
PHONO . . . . .	.25 mV/50 kohms
TAPE MONITOR 1, 2 . . . . .	.150 mV/27 kohms
Overload Level (T.H.D. 0.5%, 1 kHz):	
PHONO . . . . .	.150 mV
TAPE. . . . .	.5V
Frequency Response:	
PHONO . . . . .	.20 to 15,000 Hz, $\pm 0.3$ dB (RIAA STD)
TAPE. . . . .	.5 to 70,000 Hz, +0 dB, -1.0 dB
Tone Control:	
BASS. . . . .	$\pm 10$ dB, 100 Hz
MID. . . . .	$\pm 10$ dB, 1 kHz
TREBLE. . . . .	$\pm 10$ dB, 10 kHz
Loudness Contour . . . . .	+7 dB (100 Hz), +4 dB (10 kHz) (volume control set at -40 dB position)
Signal-to-Noise Ratio (IHF, A network):	
PHONO . . . . .	.80 dB
TAPE MONITOR 1, 2 . . . . .	.95 dB
Subsonic Filter . . . . .	-3 dB/20 Hz

### FM TUNER SECTION

Usable Sensitivity (mono) . . . . .	.10.2 dBf/1.8 $\mu$ V
DIN Sensitivity (26 dB S/N, 75 ohms) . . . . .	.1.3 $\mu$ V
50 dB Quieting Sensitivity:	
Mono . . . . .	.14.6 dBf/3 $\mu$ V
Stereo . . . . .	.37.2 dBf/40 $\mu$ V
Signal-to-Noise Ratio (at 65 dBf):	
Mono . . . . .	.85 dB
Stereo . . . . .	.80 dB
Harmonic Distortion (at 65 dBf):	
100 Hz . . . . .	.0.08% (mono), 0.1% (stereo)
1 kHz. . . . .	.0.08% (mono), 0.1% (stereo)
6 kHz. . . . .	.0.1% (mono), 0.2% (stereo)
Frequency Response . . . . .	.30 to 15,000 Hz, +0 dB, -2 dB
Capture Ratio . . . . .	.1.0 dB
Alternate Channel Selectivity ( $\pm 400$ kHz) . . . . .	.60 dB
Spurious Response Ratio. . . . .	.80 dB
Image Response Ratio . . . . .	.75 dB
IF Response Ratio . . . . .	.95 dB
AM Suppression Ratio . . . . .	.60 dB
Muting Threshold. . . . .	.20 $\mu$ V
Stereo Separation . . . . .	.100 Hz/1 kHz/10 kHz, 40 dB/45 dB/35 dB
Subcarrier Product Ratio. . . . .	.40 dB
SCA Rejection Ratio . . . . .	.65 dB
Antenna Input. . . . .	.300 ohms balanced, 75 ohms unbalanced

### AM TUNER SECTION

Sensitivity . . . . .	.250 $\mu$ V/m
Selectivity . . . . .	.40 dB
Signal-to-Noise Ratio . . . . .	.50 dB
Image Response Ratio . . . . .	.40 dB
IF Response Ratio . . . . .	.30 dB
Antenna . . . . .	.Built-in ferrite loopstick antenna

### MISCELLANEOUS

Power Requirement. . . . .	.120V/60 Hz, 220V/50 Hz, 240V/50 Hz, or 120, 220, 240V/50-60 Hz (depending on destinations)
Power Consumption . . . . .	.400 watts
Dimensions (Overall) . . . . .	.430 (W) x 115 (H) x 340 (D) mm 16-15/16" x 4-17/32" x 13-3/8"
Weight (net) . . . . .	.10.5 kg/23.1 lbs.

- Specifications and design subject to possible modification without notice.
- \*Measured pursuant to the Federal Trade Commission's Trade Regulation Rule on Power Claims for Amplifiers (applicable to the U.S.A. only).